THE INFLUENCE OF LEARNING COURSE REVIEW HOORAY AND MAKE A MATCH MODEL IN THE LEARNING OF STUDENT OF CLASS X

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ABSTRACT

Education has an important role in improving the quality of learning by implementing efforts to improve it, and it is by this research which is based on learning student learning outcomes by using Course Review Hooray (CRH) learning and make a matching model in class X Students of State Senior High School (SMA Negeri) 1 Sanden, Bantul academic year 2017/2018. This type of research uses comparative research. The population consists of all class X Science Mathematic (MIPA) as many as 112 students are divided into four classes. Sampling was done by a simple random sampling technique and obtained three sample classes, students of class X MIPA 2 as experimental class 1, X MIPA 3 as experimental class 2, and X MIPA 1 as control class with the number of students each class 28 students. The research instrument uses validity and reliability testing. The unreasonable analysis includes the test of normality and homogeneity. Analysis of the data using the anava test. The study results showed differences in mathematics learning outcomes using conventional learning models with Course Review Hooray (CRH) and matching the learning model. It was shown by starting with $f_{tabe}e = 3{,}1093$ dan $f_{count} = 26{,}902$, which means f_{count} of the CRH learning model and make a match with no difference in the result. Learning mathematics rather than conventional learning.

Keywords: Course Review Hooray, Make a Match, Mathematics Learning Outcomes.

INTRODUCTION

Education is a total investment, which is the priority and attention of all parties. All those involved in education certainly want the best quality, Sudarwan, and Heri (2015: 252). The role, The role of education is very important in the process of improving the quality of human resources. Therefore, efforts to improve the quality of learning require earnest attention. To deal with this, the government made various efforts to improve and improve the quality of education. According to RI Law Number 20 of 2003 in Fathani (2016: 136), Mathematics is one of the compulsory subjects for school students at primary and secondary education levels. At the national level, mathematics learning evaluation in schools is carried out using the National Examination (UN) standard. Meanwhile, at the International level, currently, two primary assessments examine students' mathematical and scientific abilities, namely TIMSS (Trend in International Mathematics and Science Study) and PISA (Program for International Student Assessment) . According to Suherman E, et al. (2003: 15), mathematics is a method of logical thinking, a means of thinking, the science of numbers and space, the study of the relationship of patterns, shapes, and structures.

Based on SMA Negeri 1 Sanden observations, it is known that student learning outcomes are relatively low. This is shown from students' odd semester midterm scores in the 2017/2018 academic year, not reaching more than 65, the Minimum Completeness Criteria (MCC). As many as 85.714% of the total students of grade X MIPA 1; 64.286% of the total number of grade X students of Mathematics and Natural Sciences 2; 71.442% of the total students of grade X MIPA 3.

An interview with one of the mathematics study teachers at SMA Negeri 1 Sanden stated that the basic competencies that had been applied at the school had been achieved well but were running slowly because the patterns of thinking of each child caused the learning process to be equalized between students in order to be balanced.

The hypothesis of this research are:

1. There are differences in students' mathematics learning outcomes using Conventional learning models and Make a Match.
2. There are differences in students' mathematics learning outcomes using Conventional learning models and Course Review Hoorays.
3. There are differences in students' mathematics learning outcomes using the Make a Match learning model and Course Review Hooray.

METHODS

This research is experimental. The research site was conducted at Sanden 1 Public High School, Bantul Regency. At the same time, the research time is held in the even semester of lesson 2017/2018. As for the population in this study is all students of grade X MIPA even semester state High School 1 Sanden Bantul Regency Year lesson 2017/2018 consisting of four classes, which are X class MIPA 1, X MIPA 2, X MIPA 3, and X MIPA 4 with population number 112 students. In this study, samples were taken randomly using the class's simple random sampling technique, which is the member's retrieval technique or samples from the population conducted randomly regardless of the population's strata. After random class retrieval, class X MIPA 1 As Control class, class X MIPA 2 as Experimental Class 1, Class X MIPA 3 as Experiment Class 2, and X MIPA 3 as a trial class. The study consisted of conventional learning models (X_1), model learning of Make a match (X_2), and a model review Hooray (X_3) Learning course on mathematical learning Outcomes (Y). Data collection techniques used the test method. The test method is used, a description test to obtain data about students ' mathematical learning results consisting of 4 questions. Test instruments on test results according to Arikunto (2016) correlation technique product-moment, to test the reliability of the instrument about the test result of learning results according to Arikunto, Suharsimi (2016) using Alpha formula. Once the data has been collected, the prerequisite tests' critical analysis includes the normality test, homogeneity test, and hypothesis test.

RESULTS AND DISCUSSION

Test data normality aims to determine whether the data used is the normal distribution or not. A summary of the test results normality of learning results are:

Table 1. Summary of learning results in a normality test

No	Variable	χ^2_{count}	χ^2_{table}	df	Info.
1	X_1	0,547	5,991	2	Normal
2	X_2	0,067	5,991	2	Normal
3	X_3	3,567	5,991	2	Normal

The homogeneity test aims to determine whether the sample used comes from a homogenized or not population. Summary of the results of learning homogeneity test:

Table 2. Results Summary of learning Homogenities test results

No	Variable	F_{count}	F_{table}	df	Info.
1	X_1, X_2 X_3 with Y	5,467	5,991	2	Homogeneous

A hypothesis test is used to determine the presence or absence of differences between learning models and learning outcomes. The summary test result of the Anava F test is:

Table 3. Summary of Anava Uji F hypothesis test results

No	Variable	χ^2_{count}	χ^2_{table}	df	Info.
1	X_1, X_2 X_3 with Y	26,902	3,1093	81	Rejected H_0, accepted H_1

On the hypothesis analysis, variances obtained $f_{table} = 3{,}1093$ and $f_{count} = 26{,}902$, $f_{count} > f_{table}$, then H_0 rejected, and H_1 accepted. So it can be concluded that there is a difference in learning by

using the learning model Make a Match and Course Review Hooray compared to those using conventional learning class X SMA Negeri 1 Sanden, Bantul Year lesson 2017/2018.

Since the hypothesis test results show that the learning model used is different, then the Least Significant Difference (LSD) test is performed. The LSD test summary of the learning outcomes is as follows:

Table 4. LSD Test Summary Learning Outcomes

$\lvert\bar{y}_1 = \bar{y}_2\rvert$	$\lvert\bar{y}_1 - \bar{y}_2\rvert$	**LSD**	**Significant levels**	**Info**
$\lvert\bar{y}_A = \bar{y}_B\rvert$	7,072	1,756	5%	Rejected H_0
$\lvert\bar{y}_A = \bar{y}_C\rvert$	6,816	1,756	5%	Rejected H_0
$\lvert\bar{y}_B = \bar{y}_C\rvert$	0,225	1,756	5%	Accepted H_0

LSD hypothesis Test obtained $|\bar{y}_A = \bar{y}_B| = 7{,}072$ and LSD $= 1{,}756$, $|\bar{y}_A = \bar{y}_B| >$ LSD then H_0 rejected, and H_1 accepted. $|\bar{y}_A = \bar{y}_C| = 6{,}816$ and $= 1{,}756$, $|\bar{y}_B = \bar{y}_C| >$ LSD then H_0 rejected and H_1 accepted. $|\bar{y}_B = \bar{y}_C| = 0{,}225$ dan LSD $= 1{,}756$, $|\bar{y}_B = \bar{y}_C| <$ LSD maka H_0 diterima dan H_1 ditolak.

Based on the study results, the mathematics learning test data results in a normal and homogeneous distribution. The average result of the control-class mathematics Learning Test, Experiment Class 1, and Experiment Class 2, is 63.179; 72.75; and 76.786. From the analysis hypothesis results, test variances F test variations for mathematical learning results obtained $f_{count} = 26{,}902$, $f_{table} = 3{,}1093$.

So for the hypothesis test acquired that $f_{count} > f_{table}$, then H_0 rejected. Because the hypothesized result was rejected, then continued with the Least Significant Difference (LSD) test obtained $|\bar{y}_A = \bar{y}_B| = 7{,}072$ and LSD $= 1{,}756$, $|\bar{y}_A = \bar{y}_B| >$ LSD then H_0 rejected and H_1 accepted. $|\bar{y}_A = \bar{y}_C| = 6{,}816$ and $= 1{,}756$, $|\bar{y}_B = \bar{y}_C| >$ LSD then H_0 rejected and H_1 accepted. $|\bar{y}_B = \bar{y}_C| = 0{,}225$ and $= 1{,}756$, $|\bar{y}_B = \bar{y}_C| <$ LSD then H_0 accepted and H_1 rejected.

CONCLUSION

Based on the results of the research and discussion, as described in CHAPTER IV, the following research conclusions can be taken:

1. There are different mathematical learning outcomes of students using conventional learning models and Make a Match. The average student learning results showed that Make a Match's learning model influences student learning outcomes than conventional learning models.
2. There are different mathematical learning outcomes of students using conventional learning models and Hooray Course Review. The average student learning results show that Hooray's Course Review learning model influences student learning outcomes than conventional learning models.
3. There are no differences in mathematics learning outcomes for students who use the learning model of Make a Match and Course Review Hooray. The average student learning results show that Make a Match and Course Review Hooray directly influences student learning outcomes than conventional learning models.

REFERENCES

Arikunto, Suharsimi. 2016. *Dasar-Dasar Evaluasi Pendidikan*. Bandung: Rosda.

Fathani, Abdul, H. (2016). Pengembangan Literasi Matematika Sekolah dalam Perspektif Multiple Intelegences. *Program Studi Pendidikan Matematika, FKIP Universitas Islam Malang*, 136-141.

Sudarwan, Robert, Edi dan Heri Retnawati. (2015). Pengembangan Perangkat Assesment Pembelajaran Matematika Pokok Bahasan Geometri Pengukuran SMP/MTs. *Jurnal Riset Pendidikan Matematika Universitas Negeri Yogyakarta*. Vol 2, No. 2:251-261.

Sugiyono. (2016). *Model Penelitian Pendidikan* . Bandung: Alfabeta.

Suherman, E, dkk. (2003). *Strategi Pembelajaran Matematika Kontemporer*. Bandung: Universitas Pendidikan Indonesia.